

REMARKS

This application has been amended. In particular, claim 17 has been amended to further define the lipophilic substantially continuous layer as consisting essentially of 50-98 wt.% triglyceride fat with a slip melting point of at least 30°C and 2-50 wt.% of a release agent. Support for this amendment can be found throughout the specification as originally filed, such as in the Examples portion. Thus, no new matter has been added. In view of the foregoing amendments and following remarks, Applicants submit that the pending claims are patentable over the cited art of record and the application is in condition for allowance.

Claims 17-31 stand rejected under 35 U.S.C. §103(a) for obviousness over United States Patent No. 6,149,953 to Redding, with the article from Grassas y Aceites by Nassu et al. cited as evidence. This rejection is respectfully traversed.

Redding is directed to a “seeded microcapsule.” In particular, Redding discloses a microcapsule comprising a core that is surrounded by a shell having seeding agents disposed therein. (Redding, Abstract.) The purported purpose of these seeding agents is to impart enhanced structural and/or functional characteristics to the microcapsules, such as increasing structural integrity, enhancing thermal stability, or effecting solubility. (Redding, col. 3, lines 47-59.) Different arrangements of the seeding agents are disclosed in Redding. For instance, the seeding agents can be protruding from the shell (as in Figure 1), completely imbedded in the shell (as in Figure 2), or the microcapsule can have a combination of protruding and imbedded seeding agents (as in Figure 3). (Redding, col. 3, lines 41-46.) However, the common feature of the microcapsules disclosed in Redding is that the shell comprises seeding agents, and the seeding agents are disposed, either partly or completely, within the shell portion of the microcapsule.

The present invention is directed to granules suitable for use in the preparation of a dough comprising, *inter alia*, a core comprising at least one functional bakery ingredient and a lipophilic substantially continuous layer encapsulating the core. The lipophilic layer consists essentially of 50-98 wt.% of a triglyceride fat with a slip melting point of at least 30°C and 2-50 wt.% of a release agent selected from monoglycerides, diglycerides, diacetyl tartaric acid ester of mono- and/or diglyceride, stearyl-lactylates and combinations thereof. As explained on pages 3

and 4 of the specification as filed, the present invention is designed to provide an improved lipid-encapsulated functional bakery ingredient that is relatively stable under ambient conditions and which can be released rapidly and in a controlled manner when said functionality is required, especially during proving of the dough. This allows for the more gradual release of the functional ingredient, permitting the ingredient to exert some of its functionality early on in the bread making process. As further explained in the application, the lipophilic layer has been specially tailored to achieve this result. Specifically, it is believed that the described and claimed release agents enable the controlled release of the functional bakery ingredient(s) after the granules have been incorporated in the dough and, in particular, that they enable a release that increases rapidly with increasing temperatures. The inclusion of a triglyceride fat with the claimed slip melting point also plays a role in enabling the regulated release of the functional ingredient(s) as well as impacting the stability of the granule, especially during storage. (See pages 6-7 of the specification as filed.)

The lipophilic layer defined in the claimed encapsulated granule is patentably distinguishable from the shell of the seeded microcapsule of Redding for several reasons. First, the shell of Redding includes a "seeding agent." Indeed, the principal focus of Redding is the inclusion of a "seeding agent" where the seeding agent is protruding from, imbedded within, or otherwise disposed in the shell. Redding does not disclose or suggest that the seeding agent can be either a triglyceride fat or a release agent. There is also no teaching or suggestion in Redding to remove the seeding agent. In fact, taking Redding as a whole, as must be done, Redding appears to teach away from the very idea of removing the seeding agent. Thus, Redding does not disclose or suggest granules comprising, *inter alia*, a lipophilic layer consists essentially of 50-98 wt.% of a triglyceride fat and 2-50 wt.% of a release agent due to the presence of the seeding agent.

In addition, and contrary to the conclusion drawn in the Office Action on page 4, it would not be obvious to select a triglyceride fat and a release agent selected from monoglycerides, diglycerides, diacetyl tartaric acid ester of mono- and/or diglyceride, stearyl-lactylates and combinations thereof as the components of the shell layer of Redding. The Office Action asserts that one skilled in the art would find it obvious to select from the list of potential

shell materials provided in Table 2 of Redding a vegetable oil and a mono-glyceride in order to form the shell from these two components. The rationale supporting this conclusion is that one skilled in the art would find it obvious to combine two compositions that are taught as being useful for the same purpose in order to form a third composition to be used for the very same purpose. Applicants disagree with this conclusion.

Applicants first mention that it is not clear which (if any) of the triglyceride fats listed in Table 2 have a slip melting point of at least 30°C. Secondly, there is nothing in Redding that can reasonably be interpreted as providing any motivation or other rationale that would lead one skilled in the art to combine a triglyceride fat and one of the defined release agents in the claimed amounts of 50-98 wt.% triglyceride fat and 2-50 wt.% release agent. Instead, the only observation made in Redding is that the materials that make up the shell layer “are selected on the basis of their melting point and release characteristics” and that “[m]ixtures of shell materials can be used to obtain particular combinations of physical properties.” (Redding, col. 7, lines 7-11.) Applicants submit that this would not lead one skilled in the art to combine a triglyceride fat and a mono-glyceride in the claimed amounts. Moreover, the Examples of the subject application demonstrate the beneficial results of a lipophilic layer consisting essentially of a triglyceride fat and a release agent. These results could not have been expected based on Redding, especially since Redding teaches that the seed agent acts as a basis for controlling or influencing the release of the core material. (Redding, col. 3, lines 56-59.)

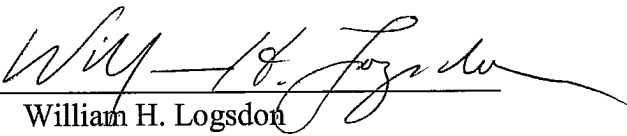
Accordingly, one skilled in the art would not find it obvious to modify Redding to achieve a granule comprising a bakery ingredient encapsulated by a lipophilic layer consisting essentially of 50-98 wt.% of a triglyceride fat and 2-50 wt.% of a release agent. Therefore, the pending claims are patentable over the cited art of record and the rejection of claims 17-31 under 35 U.S.C. §103(a) for obviousness should be reconsidered and withdrawn.

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CONCLUSION

For the foregoing reasons, Applicants submit that the pending claims are patentable over the cited art of record and are in condition for allowance. Accordingly, reconsideration of the outstanding rejections and allowance of pending claims 17-31 are respectfully requested.

Respectfully submitted,
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